



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

| APPLICATION NO. | FILING DATE | FIRST NAMED INVENTOR | ATTORNEY DOCKET NO. | CONFIRMATION NO. |
|-----------------|-------------|----------------------|---------------------|------------------|
| 10/527,914 | 03/16/2005 | Rainer Heller | 2002P11020WOUS | 9070 |

7590 12/04/2008
Siemens Corporation
Intellectual Property Department
170 Wood Avenue South
Iselin, NJ 08830

| |
|----------|
| EXAMINER |
|----------|

WU, JUNCHUN

| | |
|----------|--------------|
| ART UNIT | PAPER NUMBER |
|----------|--------------|

2191

| | |
|-----------|---------------|
| MAIL DATE | DELIVERY MODE |
|-----------|---------------|

12/04/2008

PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

| | | | |
|------------------------------|--------------------------------------|--------------------------------------|--|
| Office Action Summary | Application No. 10/527,914 | Applicant(s) HELLER ET AL. | |
| | Examiner JUNCHUN WU | Art Unit 2191 | |

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 03 September 2008.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 21,24-29,31-36 and 38 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 21,24-29,31-36 and 38 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date <u>9/15/2008</u> . | 6) <input type="checkbox"/> Other: _____ |

Art Unit: 2191

DETAILED ACTION

1. This office action is in response to the amendment filed on Sept. 3, 2008.
2. Claims 21, 24-29, 31-36, and 38 are pending.

Claim Rejections - 35 USC § 103

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

4. Claims 21, 24-29, and 31-36 are rejected under 35 U.S.C. 103(a) as being unpatentable over Gloudeman et al. (U.S. Patent No. 6,028,998 hereinafter "Gloudeman"), in view of Azarya et al. (U.S. Patent No. 5,978,578 hereinafter "Azarya").

5. Per claim 21 and 29

Gloudeman discloses

A storage medium which stores a software system for providing a programming environment to create device-independent functionality among automation devices in an automation system of the type including a plurality of automation devices (col.2 lines 20-28 "*The present invention provides an application framework that greatly simplifies developing building automation systems. The framework encapsulates the knowledge and best practices of experienced system designers, leaving the user free to create an application to solve a given building automation problem, free from worry about device-dependent details. The application framework is*

designed to be consistent across all devices on a building automation network, to ensure that the devices communicate and operate in a similar fashion.”), the system comprising:

- one or more automation engineering editors for generating solutions for one or more of the automation devices (col.11 lines 26-28 “*Typically an application is developed using the application framework to generate the application whereupon it is downloaded to the system to implement a solution.*”).
- an automation device-specific adapter for each of the automation devices, each adapter providing a translation of a solution into instructions which can be interpreted by an automation device in a different automation system, the software system providing encapsulation of specific functions of at least one of the automation devices and providing a base functionality of the one automation devices (col.2 lines 62-66 “*The application framework of the invention provides standard object types, discussed more fully below. Instances of the standard object types are created by the application development tool and then distributed to devices on the building automation system.*” & col.2 lines 41-48 “*The user creates an application to solve a building automation problem using one or more of these standard components. The model upon which the framework is based is an application-centric model. The standard components encapsulate, and thereby hide, device-specific details so that the user creates applications in terms of the desired system functionality.*”).
- the editor and compiler providing an automation functionality in a standard framework for application among automation devices having different command sets for being

Art Unit: 2191

programmed (col.2 lines 27-32 “*The application framework is designed to be consistent across all devices on a building automation network, to ensure that the devices communicate and operate in a similar fashion. The application framework defines a scalable architecture that will function on a wide range of processor platforms, from a small controller to a fully equipped operator work station.*”)

Gloudeman does not disclose

- a compiler for translating the solutions into an intermediate language in a runtime framework for further translation into different instructions for automation devices in different automation systems.

But Azarya discloses

- a compiler for translating the solutions into an intermediate language in a runtime framework for further translation into different instructions for automation devices in different automation systems (col.3 lines 16-32 “*The development system includes a real-time compiler for generating p-code to be executed on the target system. The target system, e.g., the node controller, runs the real-time kernel ... The real-time compiler generates p-code from the combination of event triggers, event actions and program logic making up the user's application.*”).
- Therefore, it would have been obvious to a person of ordinary skill in the art at the time the invention was made to combine teachings of Gloudeman and further include a compiler for translating the solutions into an intermediate language in a runtime framework for further translation into different instructions for automation devices in

Art Unit: 2191

different automation systems by the teachings of Azarya in order to provide a method for controlling a plurality of input and output (I/O) devices in accordance with a user's application, performing the command embodied in the p-code, generating any output signals in accordance with the command, and modifying any entity values in accordance with the command.

6. Per claims 24 and 32

the rejection of claim 21 is incorporated

Gloudeman further discloses

- the software system is provided for developing control software in the automation system (col.1 lines 7-11 “*The present invention relates generally to building automation systems. More particularly, the invention relates to a software application development system or framework to facilitate constructing complex building automation applications*”).

7. Per claims 25 and 33

the rejection of claim 21 is incorporated

Gloudeman further discloses

- the software system provides technological objects for automation devices (col.3 lines 3-6 “*Standard objects are the basic components used to construct assembled objects or applications. Standard objects may also be created and downloaded to devices on the system to serve as independent, standalone entities.*”).

Art Unit: 2191

- when the system includes m editors and n automation devices, at most, only n+m compilers are required to implement the solution (It combine teachings of Gloudeman and Azarya that will be at least one compiler to implement the solution).

8. Per claims 26 and 34

the rejection of claim 21 is incorporated

Gloudeman discloses

- a memory for storing automation solutions for recurring tasks (col.2 lines 48-53 “*the standard components of the preferred embodiment are illustrated to show how they are related through nesting. In FIG. 1 the shorthand notation 1-n means that the object can have one to many instances, depending on a particular building automation problem being solved.*”).

9. Per claims 27 and 35

the rejection of claim 26 is incorporated

Gloudeman discloses

- adapted for using the Internet and/or an intranet for transmitting data (col.11 lines 65-67 “*Unlike standard objects and assembly objects, an application's components may be distributed across one or more devices over a network.*”).

10. Per claims 28 and 36

the rejection of claim 21 is incorporated

Art Unit: 2191

Gloudeman discloses

- an automation- specifically designed programming language is used for developing control software for the automation system (col.13 lines 39-42 “*The presently preferred embodiment embeds the application framework in a programming tool that the application developer uses in creating applications to solve problems or meet building automation customer needs.*”).

11. Per claim 31

the rejection of claim 29 is incorporated

Gloudeman discloses

- automation functionality is provided independent of the automation device (col.3 lines 3-6 “*Standard objects are the basic components used to construct assembled objects or applications. Standard objects may also be created and downloaded to devices on the system to serve as independent, standalone entities.*”).

Per claim 38

the rejection of claim 36 is incorporated

Gloudeman discloses

- compilers are provided for mapping the programming language onto the target platform (col.6 lines 33-36 “*The present invention also provides a development system comprising a computer compiler for generating real-time code executable on a real-time kernel that resides in a target system.*”).

Response to Arguments

Applicant's arguments filed on Sept. 3, 2008 have been fully considered but they are not persuasive.

- In the remarks, Applicant argues that:
 - (a) In regard to independent claims 21 and 29 applicant respectfully submits currently claims that cited prior art does not disclose or suggest.

Examiner's response:

Examiner disagrees.

- (a) Applicant's arguments with respect to claims 21 and 29 have been considered but are moot in view of the new ground(s) of rejection— see Gloudeman and Azarya.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to JUNCHUN WU whose telephone number is (571)270-1250. The examiner can normally be reached on 8:00-17:00 M-F.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Wei Zhen can be reached on 571-272-3708. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Art Unit: 2191

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

JW

/Wei Y Zhen/

Supervisory Patent Examiner, Art Unit 2191